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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,549	03/19/2007	Patrick Gremillet	4590-531	6244
22429 7590 11/30/2007 LOWE HAUPTMAN HAM & BERNER, LLP 1700 DIAGONAL ROAD SUITE 300 ALEXANDRIA, VA 22314			EXAMINER MAI, LAM T	
			ART UNIT 2819	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

117

<b>Office Action Summary</b>	<b>Application No.</b> 10/581,549	<b>Applicant(s)</b> GREMILLET, PATRICK	
	<b>Examiner</b> LAM T. MAI	<b>Art Unit</b> 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 March 2007.
- 2a) ☐ This action is **FINAL**.
- 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 2-9, 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All b) ☐ Some \* c) ☐ None of:
      - 1. ☐ Certified copies of the priority documents have been received.
      - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 6/2/06.
- 4) ☐ Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

The abstract of the disclosure is objected to because it does not contain a single paragraph as required by MPEP § 608.01(b). Correction is required.

Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Objections***

Claim 2 is objected to because of the following informalities: Claim 2 is dependent on itself. Appropriate correction is required.

Claim 2, end of line 2, is objected to because of the following informalities: "wherein it comprises the generation of" should be deleted and ADD "further comprising generating a comb signal". Appropriate correction is required to make the claim more clarification.

Claim 4, end of line 2, is objected to because of the following informalities: "wherein it comprises the amplitude" should be deleted and ADD "further comprising generating a amplitude". Appropriate correction is required to make the claim more clarification.

Claim 6, end of line 2, is objected to because of the following informalities: "wherein it comprises the amplitude" should be deleted and ADD "further comprising generating a amplitude". Appropriate correction is required to make the claim more clarification.

Claim 8, end of line 2, is objected to because of the following informalities: "wherein it comprises the amplitude" should be deleted and ADD "further comprising generating a amplitude". Appropriate correction is required to make the claim more clarification.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 recites the limitation "the determination". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the spectrum". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the frequency response". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the pairing error". There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the channel". There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the generation". There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the sampling frequency". There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the number of channels". There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the amplitude". There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the offset voltage". There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the basic of". There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the conversion system". There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the modulation transforms". There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the deviations in gain". There is insufficient antecedent basis for this limitation in the claim.

Claim 6 recites the limitation "the input signal". There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the sampling clock temporal". There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the amplitude modulation" and "the high pass filtering" and "the modulation transform". There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the passband error". There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the subtraction" and "the signal". There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 101***

Claim 1 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 appears to simultaneously be directed

to both device (comprising ADC) and also a method (determination). The claim is not reasonable clear as to whether the scope of the claim is intended to be directed toward a device or method. Method claim should be clearly pointing out individual steps (such as, generating , determining, adding, subtracting, etc.). Device claim should be clearly pointing out individual component (such as, an ADC, a generator, etc.).

Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 appears to simultaneously be directed to both device (comprising ADC) and also a method (generation). The claim is not reasonable clear as to whether the scope of the claim is intended to be directed toward a device or method. Method claim should be clearly pointing out individual steps (such as, generating , determining, adding, subtracting, etc.). Device claim should be clearly pointing out individual component (such as, an ADC, a generator, etc.).

Claim 12 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 1 appears to simultaneously be directed to both device (comprising ADC) and also a method (mean generating as claimed in claim 1, which is method claim). The claim is not reasonable clear as to whether the scope of the claim is intended to be directed toward a device or method. Method claim should be clearly pointing out individual steps (such as, generating , determining, adding, subtracting, etc.). Device claim should be clearly pointing out individual component (such as, an ADC, a generator, etc.).

***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hummels D. M. (IEEE – Distortion Compensation for time-interleaved ADC).

Regarding claim 1, Hummel discloses an architecture and describes in abstract and paragraphs 1, 3 and 4 a technique of determining spectrum of digital signal as a function of the frequency response of a ADC system with time interleaving to at least one analog calibration signal.

Regarding claim 10, Hummel discloses an architecture and describes in abstract and paragraphs 1, 3 and 4 a technique of determining spectrum of digital signal as a function of the frequency response of a ADC system with time interleaving to at least one analog calibration signal and subtracting the output of the ADC with digital signal generated by the pairing error signal.

Regarding claim 11, Hummel discloses an architecture and describes in abstract and paragraphs 1, 3 and 4 a technique of determining spectrum of digital signal as a function of the frequency response of a ADC system with time interleaving to at least one analog calibration signal and subtracting the output of the ADC with digital signal generated by the pairing error signal.

***Allowable Subject Matter***

Claims 2-9 and 12 are objected to as being dependent upon a rejected base claim, but they would be allowable if they rewritten in independent form including all of the limitations of the base claim and any intervening claims. Features of objected claims are not taught or suggested in the prior art.



**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM T. MAI whose telephone number is (571)272-1807. The examiner can normally be reached on 5:30 am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bernie Rexford can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Lam Mai  
Art Unit 2819